

REMARKS/ARGUMENTS

Reconsideration and further examination of the present Application is requested. Claims 1-12 were pending and all were rejected. By this Amendment, Claims 1, 3-9, and 11 are amended, and Claims 2, 10, and 12 are canceled. No new matter is introduced by these amendments.

The Title was objected to, and the Title suggested by the Examiner has been adopted in the amendments. The Drawings were objected to, e.g., Figs. 1 and 3, for not including legends for elements 6, 8, 71, 72, 421, 424, 425, and 428. The Drawings have therefore been revised so that legends are included in the previously blank boxes. Standard abbreviations have been used in some cases to allow the legends to fit properly. The terminology was taken from the original Disclosure for each corresponding element. The Replacement Sheets are included here.

The Office Action rejected Claims 1-12 under 35 USC 103(a) as being unpatentable over Romesburg (US 6148078) in view of Eriksson (US 6195430). The Office Action admitted that Romesburg '078 does not teach using an echo suppression factor to gradually reduce a residual echo setting of the echo suppression factor (p). Eriksson '430 supposedly supplied this missing element.

The Office has failed to make a prima facie case of obviousness against Claims 1 and 11 because there was not stated an objective reason an artisan would make the combination of Romesburg '078 and Eriksson '430. The Office Action simply said the combination would produce the result the Inventor himself has disclosed. The Law requires the Office to make a reasonable and legitimate statement of motivation why an artisan would be guided to make the combination claimed. Objective sources must be cited that express or imply the functionality of making the combination. Such suggestions must be particular to the technology and problems being solved, not general desirements like "improving performance." Pollyanna reasons are not legally sufficient.

The Office compounds the error by using the combination of Romesburg '078 and Eriksson '430 to reject Claims 2-10. So these too have been impermissibly rejected.

Romesburg '078 does not teach the "speech activity detection unit (7) for detecting a speech signal contained in the input audio signal (A1)" recited as the first

element of Claim 1. The Office Action vaguely implies some speech activity detection in echo suppressor (ES) 130 in Romesburg '078, but the Reference itself does not support the allegation. There is no speech activity detection, only a loudspeaker activity detector 210, which is not the same thing.

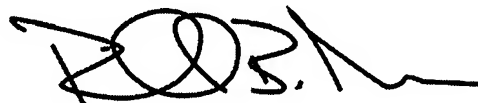
Romesburg '078 does not teach the "control unit (6) for setting an echo suppression factor (s) of the echo reduction unit (4) for echo suppression," as recited as the second element of Claim 1. The Office Action admits this failing.

Eriksson '430 does not teach, "reducing an echo suppression factor (s) gradually and continuously from a high echo suppression value set while a speech signal is present in the input audio signal to a low echo suppression value if a speech activity detection unit detects that an input audio signal does not contain any speech signal." Instead, it teaches an echo canceller determines a dynamic threshold that depends on a non-linear error power estimate and also a linear error power estimate. A residual power estimate of a residual signal is compared to this dynamic threshold. The residual signal is attenuated in a non-linear processor if the residual estimate falls below the dynamic threshold. In Fig. 11, it can be seen that the switch is an abrupt step function, and exactly what embodiments of the present invention avoid.

The two teachings are very different approaches and Eriksson '430 does not support a rejection of Claims 1-11 under 35 USC 103. Claim 1 is amended to more precisely recite the intended subject matter.

Claims 1, 3-9, and 11 are now believed to be in condition for allowance, and withdrawal of the rejections appears to be appropriate. If any remaining issues can be addressed on the telephone, the Examiner is invited to call the undersigned at (919) 226-6745.

Respectfully submitted,



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